

XIII. Radioactive Materials

Section XIII of the 2002-2003 season plans lists the radioactive materials to be used and provides information regarding their form, nuclide, site, and specific use.

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BG-232-O	³ H	³ H – Water	R/V <i>Laurence M. Gould</i>	Foraging Ecology of Crabeater Seals
BG-235-O	³ H ¹⁴ C	³ H – Thymidine ¹⁴ C – Sodium Bicarbonate	R/V <i>Laurence M. Gould</i>	Winter Distribution and Activities of Sea Ice Microbial Communities in the Western Antarctic Peninsula Region
BG-246-O	¹⁴ C	¹⁴ C – Sodium Bicarbonate	R/V <i>Nathaniel B. Palmer</i>	Winter Ecology of Larval Krill: Quantifying Their Interaction With The Pack Ice Habitat
BP-016-O	¹⁴ C	¹⁴ C - Sodium Bicarbonate	Palmer Station, R/V <i>Laurence M. Gould</i>	Palmer, Antarctica Long Term Ecological Research Project: Climate Migration, Ecological Response, and Teleconnections in an Ice-Dominated Environment (Phytoplankton Group)

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BP-045-O	³ H	³ H – Water	Palmer Station <i>R/V Laurence M. Gould</i>	Palmer, Antarctica Long Term Ecological Research Project: Climate Migration, Ecological Response, and Teleconnections in an Ice-Dominated Environment
BO-179-O	³ H	³ H - Leucine	Palmer Station	Gene Expression in Extreme Environments: Extending Microarray Technology to Understand Life at its Limits. Field Season 2002-2003
BO-001-O	¹⁴ C	¹⁴ C - Sodium Bicarbonate	McMurdo Station	Function and Chemical Nature of Ice-active Substances Associated with Sea Ice Diatoms
BO-005-O	¹⁴ C ³ H	¹⁴ C – Sodium Bicarbonate ³ H- Leucine	McMurdo Station	Antifreeze Proteins in Antarctic Fishes
BO-006-O	¹⁴ C ³ H ³⁵ S	¹⁴ C - Alanine ¹⁴ C - Leucine ¹⁴ C - ATP ³ H - Uridine ³ H - Lysine ³⁵ S - Methionine	McMurdo Station	Energetics of Protein Metabolism During Development of Antarctic Echinoderms
BO-047-O	¹⁴ C	¹⁴ C – Sodium Bicarbonate	McMurdo Station, US Coast Guard <i>Polar Sea</i>	Interannual Variability in the Antarctic Ross Sea: Nutrient Fields and Seasonal Productivity II

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BO-134-O	³⁵ S	³⁵ S – Amino Acid Mixture	McMurdo Station	Evolutionary Loss of Heat Shock Response In Antarctic Fishes
BM-042-P	¹⁴ C ³ H	¹⁴ C – Bicarbonate/ Carbonate ³ H - Thymidine	McMurdo Station/Dry Valleys	The Role of Natural Legacy on Ecosystem Function and Structure in a Polar Desert
BM-042-W	¹⁴ C	¹⁴ C - Sodium Bicarbonate	McMurdo Station	McMurdo Dry Valleys LTER
OO-257-O	⁶³ Ni	⁶³ Ni - Foil or Plated source	South Pole Station	South Pole Monitoring for Climatic Change: U.S. Department of Commerce; National Oceanic and Atmospheric Administration, Climate Monitoring and Diagnostics Laboratory (Source is inside an electron capture detector of a gas chromatograph)